

## GENERALISTS VERSUS SPECIALISTS: SKILL USE IN COMPARATIVE PERSPECTIVE

### 1. Introduction: there is a repeated overestimation of property issue

After the Second World War, a particular system of the political-ideological and economic monopoly has been created in the Central (Eastern) European countries, including Hungary. The political-ideological monopoly was represented by the monolithic party (party-state) system and its dominant Marxist ideology - these are well known and well documented characteristics of the ex-socialist system in Europe. The economic monopoly has been based, first of all, on the almost full nationalization of the industrial, trade, service and partly the agricultural sectors. To illustrate the extent of changes in the Hungarian property structure, it is worth to note that, before the Second World War, only 10 % of the industrial assets were state owned. (Bakos, 1991, 3.) The economic monopoly based not only on the almost exclusive property rights of the state, but also on the over centralized organizational structure of the so-called "command economy". For instance, the average number of persons employed in the socialist firms was more than twice as much than in the capitalist firms. (Kornai, 1989.) This economic monopoly was completed by a hegemonic position of the Marxist ideology, which overemphasized the positive impact of the enormous changes in the property structure in the country. According to that mechanistic social view in relation to socialism, the elimination of the private ownership in the economy in itself could produce harmonious social relations at the workplace and in the society as a whole. This simplistic approach overlooked the fact that the overthrow of the private ownership will not produce automatically the overthrow of the relations of interest and power related to the division and specialization of work, not speaking about less of the other social and economic institutions (for instance, the centralized redistribution of resources lacking the social control, non-tolerance of the individual and collective (civil) initiatives etc.) which have an important and long lasting impact on the integra-

tive mechanisms both at national and firm level. This conflict-free view of society was questioned in Hungary from the early 1970's on. Industrial sociologists produced convincing empirical evidence about the power and interests conflicts at the work-place level, resulting in the well known practice of "restriction of output". (Héthy & Makó 1988.)

Today, we can assist to a very similar kind of social view; the present radical shift from the hegemonistic Marxist ideology related to the dominance of state property, into the direction of the liberal-conservative one, based on the dominance of private ownership. This ideology and the policy of privatization based on it, intend to neglect again the complexity of social relations and its effects in the firm. The supporters of this approach - like their ancestors who tried to create homogeneous state property structure - have a belief that private property in itself could create the market economy and improved economic performance both at firm and national level. For instance, they do not want to realize in the functioning of the economy the importance of the range of economic and social factors influencing the use of property. (Richet 1991.)

In this paper, we try to identify some of the social mechanisms regulating human cooperation - through that economic performance - within the firm. In relation to that we hope also to demonstrate the autonomous role of the "qualificational" and "organizational" spaces in which any kind of "property relations" are embedded at firm level. For instance, the patterns and values of behaviours are shaped in the long run - among other factors - by the methods and institutions of the education and training, promotion and career system, etc. functioning in the economic organization. The practice of skill use and promotion within the firm plays the role of a "learning process" shaping the participant's values and attitudes.

Using the tool of a cross national survey, we try to identify and compare the heterogeneous practice of the skill utilization, training policy and job mobility in the large firms working in the state or quasi-state (it means overregulated private sector) sectors of the energy production. (Ishikawa, Makó & Novoszách 1991.)

Before presenting some results of the comparative analysis, we would like to raise briefly some risks of the cross national surveys or in general of the international comparative work. A source of frequent distortions lies in, for instance, the inclination of social scientists in the countries of the Central (Eastern) European region to compare realities prevailing in their own (national) institutions (for instance the existing system of training and retraining) to the idealized image of similar institutions in the developed (capitalist) countries. There is another danger, no less frequent and increasingly felt, that specialists, (consultants) from countries with a developed market economy and a democratic system, offering their services within the framework of various assistance programs, view the current difficulties and the social-cultural heritage in the ex-socialist countries with an approach learned within the political and economic context of their own societies. This is apt to result in diagnoses which regard differences from the economic and political institutions of the advanced capitalist countries simply as a phenomenon of economic and social backwardness. The particular performance of the Japanese society and economy which has deviated from North American or Western European models of the market economy, without usually seeming less efficient, represents another viable model of development. (Humphrey 1988.)

## **2. Purpose and field of research**

The research project aimed at a comparative analysis of the educational-training practice, job mobility and promotion system, work organization and decision making system, labour relations and trust relations within the Hungarian and Japanese power plants.

The design and methods of research originally were elaborated by the Japanese research team (headed by Akihiro Ishikawa) but the Hungarian research team members extensively used during the field-work the techniques of the "focused-interview" and heavily relied to the use of company statistics and documents. The data obtained by the standard questionnaire were analyzed by the methods of multi-variate analysis. The

joint-survey was carried out in 1988-1989, and in some respects - labour relations, decision-making - it was repeated in 1992.

For the purpose of the joint survey, the Japanese research team selected two firms, namely Kashima Power Plant in Ibaraki Prefecture and Hirono Power Plant in Fukushima Prefecture, both belonging to the Tokyo Metropolitan Electric Power Corporation. The fuel used by the Japanese power plants are oil and gas, and both of them are highly automated. The number of people surveyed in these two firms was 467.

The two Hungarian firms involved in this international project were Tisza Power Plant in Borsod-Abaúj-Zemplén Prefecture and Gyöngyös Power Plant in Heves Prefecture, both situated in the Northern Hungary. The selected power plants are belonging to the Hungarian Power Works Co. Ltd.

The first Hungarian Power Plant uses gas and coal for the energy production. The second one is a coal based power plant. The level of automation in the Hungarian power plants lags behind the level of Japanese power plants.

In this paper, we intend to present some characteristics of the skill use and training policy as well as the job mobility and pattern of promotion comparing the Hungarian and the Japanese company's practice.

### **3. Education and training. The roles of "Off JT" and "OJT"**

A comparison of the data for the two countries showed that the average level of schooling was higher for employees in the Japanese power plants than for those in the Hungarian power plants participating in the joint survey.

## Level of Education at the Power Plants, %

(1989)

	Hungary	Japan
Primary school (8 or 9 years)	20.0	3.2
Secondary School (4 years)	66.8	81.5
Higher education (3-5 years)	7.7	15.5
N.A.	3.5	0.8

Note: In Japan the average blue collar worker finished the ninth grade's primary school already in the 1960's.

"Lifetime employment" is the cornerstone of the Japan's organization oriented employment system. The large firms - as the power plants surveyed - employ the personnel throughout the entire working life, from entry into service till the end of the working career. In return, employees have to show maximum loyalty and commitment to their company. Naturally this system of loyalty implies a considerable restriction of individual freedom of choice. The lack of mobility between firms is replaced by the maintenance of a "learning community" in the large firms. This means that the "lifetime employment" system is fully developed only in the large firm's sector in Japan. Only the "core" manpower can enjoy this privilege of employment stability. This represents only about 20-25 % of the total workforce. The peripheral workforce composed by unskilled workers, women or employees in the small firms and subcontracting firms' sector are excluded from this system of employment. This is well illustrated by the results of multi-variate dispersion analysis in the case of the Japanese power plants, as this is the probable explanation for the fact that those employees who



had previous employment elsewhere have a much lower level of qualification than the rest of employees. Characteristically, only one third of them completed the primary school level, none possessed secondary education, and as low as 6.7 % had university degree. (We should like to note that in the Japanese power plants, the personnel management does not use the category of "blue collar workers", but only the notion of "employees".)

The noticeable differences in the formal education in relation to the length of service in the firm are symptoms of a very strong tendency for the Japanese power plants to employ as highly qualified personnel as possible. Among the employees with less than four years of service, we found none with only primary education, whereas the ratio of employees with university diploma was 40 % for those with one year of service, and 30.8 % for those with three or four years of service in the same enterprise. As can be seen, the level of formal education has an increasing role to play in the treatment of newcomers by the Japanese power plants. In addition, there is a great emphasis in recruiting new entrants, that is so characteristic of the large Japanese firms participating in the cross-national survey running their own ("home") educational institutions, to which young people are admitted, and accommodated in the company operated student's hostels, following the nine years of general education. Further there is training designed to the special manpower policy of the power plants, which has an ambition to employ mainly students graduating from their company's school. Moreover, the training of new entrants is not limited to the completion of studies in these "home" educational institutions, but really begins in effect after recruitment, in the form of "on the job-training" (JOT). As a matter of fact, vocational training in Japan begins, as a rule, not at school, but at the firms, where employees receive training in a variety of skills and even university graduates are trained - by rotation jobs - to become multi-skilled "generalists" instead of "specialists". This training process is usually rather long (10 to 15 years) and rather costly, an aspect which along with tradition is an important economic motive of "lifetime employment". Avoiding the overheated debate over the schemes of "generalist vs specialist" training practiced by the large Japanese firms, we would like to call attention to another dimension of the

Japanese human resource policy: the importance of the so-called "slow-track" compared to the "fast-track" promotion systems widely used by European - including Hungarian firms. (Koike 1991.) We will discuss it in more detail in the next part the paper.

The other important feature of qualifications (or in more general sense of skills) is their more homogeneous character in the Japanese power plants compared to the Hungarian ones. Among employees of the Japanese power plants none was found to possess anything less than secondary school diplomas whereas university degrees were held by 25 % of the employees. By contrast, 29 % of the workers in the Hungarian power plants completed primary school (eight grades) and as low as 0.4 % finished secondary school ("college").

University and college graduates at the Japanese firms do not hesitate at all to start their careers at production related jobs, that are low in the hierarchy of the jobs and but appreciate the importance "on the job-training" (OJT).

"First we engage all our engineers in direct production for a sufficiently long period for them to understand how the jobs they are doing fit into the production technology. Certain foreign engineers dislike this, but according to all indications, Japanese engineers are glad to be able to gain "first hand" experience". (Morita 1989, 11.)

By contrast, the Hungarian power plants assign newly recruited university graduates á priori to white collar jobs, a reason why Hungarian workers show notable differences not only in the level of education but also in the content of the skills:

"The company management made a mistake of pooling engineers in one department, although they would be needed here in the workshop, where even research engineers could be working on the project development with greater efficiency." - said one maintenance worker.

Blue collar workers at shop-floor level and those in charge to manage production show great differences in schooling. For instance, in the case of blue collar workers and middle and top managers in the Hungarian power plants, the only common schooling experience consists of the compulsory eight grades of primary school.

At the Hungarian power plants, the average number of grades completed is 12.57 years with a standard deviation of 2.86 years, meaning that in the case of 95 % of the interviewed the number of grades completed varies between 12.57 (+2.86) and 12.57 (-2.86).

### **Job categories and the years of schooling**

Job title	Average number of years completed	Standard deviation
Blue collar worker	10.77	1.96
Clerical employee	12.12	1.18
Technical employee	14.93	2.64
First line supervisor	13.79	2.12
Middle and top manager	15.87	2.47

The differences in standard deviation indicate the degree of homogeneity of the different job categories. According to that, the job category of the clerical employees is the least homogeneous one. Another important feature of the skill use in the Hungarian power plants is that the differences in the level of education (qualification) between members in the various job categories were widened rather than narrowed by the further education or training (Off Job-Training, OJT) organized by the company itself. This is most striking when blue collar workers and clerical employees generally



with lower level of education starting their career in the firm are compared with technical employees as well as with middle and top level managers, who started their career with higher level of education. For instance, 85.3 % of the workforce in the Hungarian power plants (91 % of blue collar workers and 98 % of administrative employees) did not obtain higher education than their starting level of education in the firm, whereas one-half of technical employees and first line supervisors and 58 % of the middle and top managers improved their starting level of education. It is not by chance that those with university or college diploma, who are employed in the Hungarian power plants try to avoid jobs in the workshop and wish to increase their formal level of qualification at the educational institutions rather than to participate in the practice on the job training (OJT). When it comes to chances of promotion, participation in the formal education and the documented knowledge - that is off the job training (Off JT) has a dominant role to play. Formal schooling is overestimated and the practical knowledge is underestimated in the training policy of the firms, despite the fact that, as is shown by international experiences, the formal education conveys but a small part of desirable skills. In relation to the importance of the OJT, it is worth to note the lesson drawn from the comparison of the Japanese and South-East Asian worker's performance in the automated process (cement) industry; "The cross-national discrepancy in the proportion of production workers who are capable of handling unusual operations is substantial, particularly when it comes to dealing with problems. Most production workers can conduct such work in the Japanese case, but no more than 10-20% can do so in the Malaysian and Thai cases." (Koike & Takenori 1990, 22.) The same rate is valid for the production employees in the Japanese power plants and about 30 to 40 % of the production workers are capable of handling non-routine cases in the Hungarian power plants.

Workers' undocumented "tacit skill" and invisible experiences are accessible to employees working in other job categories (for instance managers and technical employees) mainly in the form of professional cooperation in the labour process. This is why the informal relations and the good relations with the "workshop-community" for the management play particular significance to guarantee the smooth functioning

of production. But the overestimation of the formal schooling (Off JT) and systematic underestimation of OJT in the promotion policy of the Hungarian power plants raise non-negligible difficulties for the cooperation between production workers and those who are responsible to organize and manage the labour process. The different knowledge and work-related values as well as the social models of cooperation embodied in them do not homogenize, instead they heterogenize social relations in the firm. For instance, both groups, the blue collar workers and technical employees (engineers) witness daily conflicts and tensions, yet, characteristically, they form quite different ideas and methods how to eliminate them.

From the position of the blue collar workers, university graduates should learn more practical experience at workshop level;

"...technical employees have a very high level of technical knowledge, but very little practical experience. Therefore they have no prestige in the eyes of workers. We have suggested in various ways that young engineers should start on shop-floor level." (skilled worker.)

On the other hand, engineers and medium and top level managers expect to eliminate the conflicts described above, thanks to the creation of an "intermediate job category": the job of the so-called "production technician" who could play the "role of bridge" between the blue collar workers and engineers and managers.

The Japanese managers in the power plants tend likewise to highly estimate the university degree, but by no means underestimate practical knowledge acquired in production (in the form of OJT), so their value orientation is centered on "proven ability" rather than on "documented ability".

#### **4. Promotion system: "slow track" versus "fast track" career**

In the joint survey we considered jobs to be one of the most important variables in analyzing social relations in the work organization.

### Job categories by countries, %

Job categories	Hungary	Japan
Blue collar workers	76.6	2.6
Clerical employees	9.1	18.2
Technical employees	5.4	56.2
First-line supervisors	5.4	1.3
Middle & top managers	3.3	19.1
N.A.	0.2	2.6

The ratio of blue collar workers at the Japanese power plants is strikingly low (2.6 %). This can be explained by the unique personnel policy of the Japanese power plants - participating in the joint survey - which does not use the category of "blue collar worker". People engaged in production and doing no administrative tasks are officially classified as technical employees. It would also be noted about this job classification that after the Second World War, an important segment of large Japanese companies abolished the categories of "manual" and "non-manual" workers, but retained the differentiation between "blue collar" (KOIN) and "white collar" (SHOKIUN) staffs (the former represents workers and the latter staff members who start their careers as clerks and technical employees.) Although "white collar" workers stand greater chances of promotion to middle and top level managerial positions, differences in earnings, other benefits and employment conditions are minimal between "blue collar" and "white collar" workers. It is equally surprising that in the Japanese power plants the combined proportion of workers and technical employees is just short of 59 % and that

of the first-line supervisor is as low as 1.3 %, whereas the proportion of clerical (administrative) employees is 18.2 %, twice the proportion for the Hungarian power plants. The proportions of the various job categories do not allow by themselves any conclusion to be drawn about the efficient operation of any economic organization. Contrary to the public belief in Hungary, a low proportion of administrative and managerial staff is not necessarily a criteria of well-functioning organizations. Different proportions of employees in these job categories may result in equally outstanding or poor records of firms' performance.

Concerning the promotion system, the most surprising difference is in that while in Japanese power plants promotion depends mainly on age and the length of service, in the Hungarian power plants it depends more on the jobs held at the time of taking up employment and the level of formal education. An essential element of the Japanese promotion system is, (as in the case of the incentive system, NENKO) seniority, that is to say career development in rank and position depends primarily on the length of service in the firm, employees being differentiated by individual performance criteria only after length of service. This practice reflects the logic of the "slow track" career mechanism. People are chosen for senior or managerial position not simply because of academic qualifications, but because they have demonstrated their abilities during the job-training (OJT) and in enlisting their colleagues' cooperation.

Large firms in Japan do not usually assign outsiders to senior positions. It is virtually impossible for someone to start his career in a senior (or managerial) position; only 2 % of managers covered by the joint survey started employment in jobs similar to those they held at present and the rest started as subordinates. As opposed to the "fast track" career development in the Hungarian power plants, Japanese firms select top managers after long years of professional practice (15 years, as a rule). Contrary to the widely held views, this is not a long-standing cultural tradition (one element of the "unique Japanese working culture"), as this system of "low track" career has not established itself until at the turn of the century when heavy industry was replacing the dominant role of light industry. Its greatest merit is that managerial posts are filled with people

after a long period of a learning and evaluation process. This system of promotion is more suitable to "weed" those unfit for leadership and management.

By contrast, in the case of the Hungarian power plants, 6.8% of the first-line supervisors and 16.3% of middle and top level managers started their careers as such at their present company, whereas 6.3% of the them held lower level managerial positions. Apart from the fact that a considerable proportion of managers at the Hungarian power plants started their careers in managerial positions, it is worth to note that a rather high proportion of them had never been engaged in direct production before they filled managerial posts. This holds for 27.2% of the first-line managers and three quarters of middle and top level managers in the Hungarian power plants. In addition, nearly two thirds of technical employees, who are the primary source of management recruitment, were not engaged in direct production in their previous jobs.

The employees' professional career involves both "upward" and "downward" mobility during working life, with typical variations also found in respect of the latter at the firms in the two countries. At the Hungarian power plants there were no cases of "downward" mobility, except two administrative employees who had become workers. The professional and moral respect of management is substantially eroded by the near impossibility of "downward" mobility from senior positions. As one first-line supervisor noticed; "There was no change in enterprise management either with the same persons responsible for the bad situation still sitting there. The enterprise saw no change. Managerial posts are still held by the same people who have filled them for 30 years. Some changes are noticeable in few respects. Sooner or later, there's got to be a change in this respect as well. We have at the enterprise a second-ranking group of young managers, who might be able to change things, provided the old ones allowed them some scope to do so."



## 5. Some concluding remarks

The so-called "high involvement working systems" and the functional flexibility (internal mobility), commonly known characteristics of the human resource policy in the large Japanese firms, are inseparable from the social-organizational dimensions of the skill utilization and the promotion system. Along with the officially recognized knowledge (high appreciation of diplomas), incentives for and recognition of efforts to participate on the job-training (OJT) and to acquire a "proven knowledge" are playing a central role in the training and promotion policies. In this system of manpower use, there is no clear-cut job demarcation and individual task-assignment. The importance of the acquisition of practical knowledge and the accumulation of skills are well reflected in the joint-survey data, according to which as low as 2% of Japanese managers started their career as managers. By contrast, the proportion of managers starting their career as managers was found to be several times higher than that figure in the Hungarian power plants.

The Hungarian power plants' job policy is characterized by rigid job demarcation and correspondingly an overspecialized skill and manpower use. In most cases, the shared common professional experiences and values are missing in the relations between blue collar workers, engineers and managers. Plus, the remarkable differences in the level of official qualifications, are not reduced by the company efforts in the forms of OFF JT or OJT. This means that in the Hungarian firms, the role of "organizational space" is much stronger than the role of "qualifications space" in the creation of cooperation among the partners of the labour process.

The promotion system in the Hungarian power plants is not only characterized by its "fast track" nature, but also by the overestimation of the role of "documented knowledge" (diploma) at the expense of "proven knowledge".

Unfortunately, today's overheated debate about the speed, methods, origin of new owners etc. of privatization is diverting attention from the social-organizational context

of property. This is also true in the case of the Hungarian power plants whose property structure also underwent important changes during last two years. But the system of skill use and promotion have functioned basically according to the pattern described in this paper.

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